

112/1 36. The method of claim 34 wherein the antireflective composition comprises a silsesquioxane resin.

75-56
Specie

37. The method of claim 35 wherein the organosilicon resin comprises a radiation absorbing chromophore.

38. The method of claim 37 wherein the chromophore is one or more anthracene groups.

Specie

39. The method of claim 37 wherein the chromophore is one or more naphthyl groups.

Specie

40. The method of claim 37 wherein the chromophore is one or more phenyl groups.

Specie

41. The method of claim 34 wherein the antireflective composition comprises an organosilicon resin and a separate component that comprises a radiation absorbing chromophore.

112/1 42. The method of claim 41 wherein the organosilicon resin is a silsesquioxane resin.

43. The method of claim 41 wherein the chromophore is one or more anthracene groups.

44. The method of claim 41 wherein the chromophore is one or more naphthyl groups.

45. The method of claim 41 wherein the chromophore is one or more phenyl groups.

46. The method of claim 34 wherein the antireflective composition is applied by spin coating.

47. The method of claim 34 wherein the antireflective composition comprises a component that has aromatic groups.

48. The method of claim 47 wherein the aromatic groups are carbocyclic aryl groups.

49. The method of claim 47 wherein the aromatic groups are optionally substituted anthracenyl groups, optionally substituted naphthyl groups or optionally substituted phenyl groups.

C1 ✓ 50. The method of claim 34 wherein the photoresist is imaged with radiation having a wavelength of about 248 nm and the antireflective composition comprises a component that has optionally substituted anthracene groups. *col 119*

51. The method of claim 34 wherein the photoresist is imaged with radiation having a wavelength of about 248 nm and the antireflective composition comprises a component that has optionally substituted naphthyl groups.

52. The method of claim 34 wherein the photoresist is imaged with radiation having a wavelength of about 193 nm and the antireflective composition comprises a component that has optionally substituted phenyl groups.

53. The method of claim 34 wherein the dielectric layer is an inorganic layer.

54. The method of claim 34 wherein the dielectric layer comprises SiO₂. *Jan 10*

55. The method of claim 34 wherein the dielectric layer comprises an organic resin.

✓ Rule 1.126
56-57.

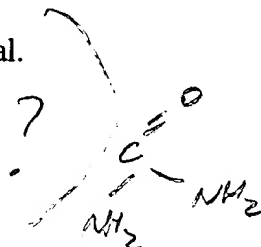
The method of claim 34 wherein the antireflective composition further comprises a crosslinker.

✓ 57-58.

The method of claim ⁵⁶57 wherein the crosslinker is an amine-based material.

~~58-59.~~

The method of claim ⁵⁶57 wherein the crosslinker is a glycouril.



✓ 59-60.

The method of claim ⁵⁶57 wherein the antireflective composition further comprises an acid or acid generator compound.

C1
60-61. The method of claim 34 wherein the antireflective composition is crosslinked prior to applying the photoresist composition layer.

61-62. The method of claim 34 wherein the antireflective composition is thermally treated prior to applying the photoresist composition layer.

✓ 62-63. A method for forming a photoresist relief image, comprising:

(a) applying over an integrated circuit substrate a coating layer of an organic antireflective composition that comprises an organosilicon resin;

(b) applying a coating layer of a photoresist composition over the antireflective composition layer;

(c) exposing to patterned radiation and developing the photoresist composition coating layer to form a photoresist relief image.

~~63-64.~~

⁶²The method of claim ⁶²63 wherein the organosilicon resin is a silsesquioxane resin.

^{62 63}
~~64~~ 65. The method of claim ~~63~~ or ~~64~~ wherein the organosilicon resin comprises a radiation absorbing chromophore.

⁶⁴
~~65~~ 66. The method of claim ~~65~~ wherein the chromophore is one or more anthracene groups.

⁶⁴
~~66~~ 67. The method of claim ~~65~~ wherein the chromophore is one or more naphthyl groups.

⁶⁴
~~67~~ 68. The method of claim ~~65~~ wherein the chromophore is one or more phenyl groups.

⁶²
~~68~~ 69. The method of claim ~~63~~ wherein the antireflective composition comprises an organosilicon resin and a separate component that comprises a radiation absorbing chromophore.

C1
⁶⁸
~~69~~ 70. The method of claim ~~69~~ wherein the organosilicon resin is a silsesquioxane resin.

^{68 69}
~~70~~ 71. The method of claim ~~69~~ or ~~70~~ wherein the chromophore is one or more anthracene groups.

^{68 69}
~~71~~ 72. The method of claim ~~69~~ or ~~70~~ wherein the chromophore is one or more naphthyl groups.

^{68 69}
~~72~~ 73. The method of claim ~~69~~ or ~~70~~ wherein the chromophore is one or more phenyl groups.

⁶²
~~73~~ 74. The method of claim ~~63~~ wherein the antireflective composition is applied by spin coating.

⁶²
74 ✓ 75. The method of claim ~~63~~ wherein the antireflective composition comprises a component that has aromatic groups.

⁷⁴
75 ✓ 76. The method of claim ~~75~~ wherein the aromatic groups are carbocyclic aryl groups.

⁷⁵
76 ✓ 77. The method of claim ~~76~~ wherein the aromatic groups are optionally substituted anthracenyl groups, optionally substituted naphthyl groups or optionally substituted phenyl groups.

⁶²
77 ✓ 78. The method of claim ~~63~~ wherein the photoresist is imaged with radiation having a wavelength of about 248 nm and the antireflective composition comprises a component that has optionally substituted anthracene groups.

C I ⁶²
78 ✓ 79. The method of claim ~~63~~ wherein the photoresist is imaged with radiation having a wavelength of about 248 nm and the antireflective composition comprises a component that has optionally substituted naphthyl groups.

⁶²
79 ✓ 80. The method of claim ~~63~~ wherein the photoresist is imaged with radiation having a wavelength of about 193 nm and the antireflective composition comprises a component that has optionally substituted phenyl groups.

REMARKS

Enclosed is a copy of a previously filed Change of Attorney's Address form. Applicants respectfully requests that the USPTO correspondence address for the present application be changed as indicated on that form.